SCIENCE & GOVERNMENT REPORT

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White House Science Post Snared in Ford-Reagan Race

Guy Stever, director of the National Science Foundation, was reluctantly responding last month to an invitation to become White House science adviser when he got run over by the Ford-Reagan race for Republican convention delegates.

As a result of this improbable collision between intra-party politics and the dutiful, non-partisan Dr. Stever, the post of presidential science adviser was still vacant six weeks after Mr. Ford signed it into existence.

Finishing out 4 years as NSF Director, and 2 years in the part-time post of presidential science adviser, Stever was not first choice for the newly created position of full-time adviser, nor did he want the job. However,

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with the Ford Administration running out of time and its election chances looking wobbily, no one else deemed suitable wanted it either, and Stever was asked early in June if he would accept. The minuet of White House job placement calls for an acceptance before a firm offer is made, so that no opportunity is created for an affront to the President.

As of three weeks ago, however, it was clear that if Stever wanted the job—a dual post consisting of adviser to the President and Director of the new Office of Science and Technology Policy (OSTP)—it was his. He was not keen for the appointment, but he was persuaded by the argument that the President needed him, that he was already halfway into the job as adviser, and that it would look bad for the scientific community if it failed to produce an acceptable candidate for an office it had long urged on Congress and the White House.

Stever was about to say yes, when the White House received a letter, dated June 9, in which four right-wing Republican Senators urged the President not to appoint him.

Signed by Jesse Helms (N.C.), Carl Curtis (Neb.), James McClure (Idaho), and Clifford Hanson (Wyo.), the letter rehashed the charges that another rightwinger, Rep. John Conlan (Ariz.), has exploited against NSF.

The Conlan link was not coincidental, for the author of the letter, McClure, was briefed by a Conlan aide, George Archibald, when the two and several other Senators and staff assistants ran into each other a few days earlier on another item of business.

In a non-election year, the scurvy missive would have been dismissed with a form reply. But Ford is in no position to offend the right-wing of his party, and the right-wingers, noting that Ford and Reagan are neck and neck for the nomination, are eager to exploit the President's vulnerability. Meanwhile, by directive or osmosis, Administration officials are extraordinarily sensitive to the need to avoid creating any convention problems for their beleagured chief.

The letter to Ford stated that "The General Accounting Office recently reported to the Congress that NSF officials have seriously manipulated and abused the NSF grant award process in connection with a multi-million dollar curriculum project long supported by the Foundation. Prior to the GAO report," it continued, "Dr. Stever and other top NSF officials had repeatedly

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In Brief

HEW's Review Panel on New Drug Regulation has virtually collapsed, following its 6-1 rejection of FDA Commissioner Schmidt's whitewash of his agency (SGR Vol. VI, No. 10). The lone dissenter, Chairman Thomas Chalmers, has resigned, as has the executive secretary of the panel, Lionel Bernstein. Officially, the Panel goes on with its work, but HEW Secretary Mathews has rejected both its request for a re-investigation of charges against the agency and a 3-month extension beyond the Panel's September 30 expiration date.

Senator Kennedy's planned 1-year inquiry into the report of the President's Biomedical Research Panel got off to a contentious start last month with a 2-day hearing at which the 7-member panel defended its report while Kennedy and Senator Schweiker strongly suggested that the Panel was preoccupied with research and little interested in NIH's responsibilities for finding cures. The dialogue, at times quite heated and repetitious, was not distinguished for clarity, especially on the senatorial side.

The oft-cited immortality of research organizations faces a bit of a test at the University of Texas, which announces adoption of a 5-year charter system for its research units. At the end of that period, "the charter may be renewed, the research mission or organization may be changed or the research unit may be abolished."

The Rev. Moon is Back to Unify the Sciences

The Rev. Sun Myung Moon, the ecclesiastical huckster who lives off street corner peddlers and South Korean sweatshops, has once again signed up a sizeable slice of the scholarly elite for his annual International Conference on the Unity of the Sciences (SGR Vol. V, No. 14).

The conference, fifth in a series put on by a Moon-front, the International Cultural Foundation, will be held in Washington November 26-28 on the subject of "The Search for Absolute Values: Harmony Among the Sciences." According to an announcement from the Foundation, there will be 360 participants "from all over the world." The Moon folk are tightlipped about money matters, but at last year's conference, held in New York City, some of the senior-level participants received $3000 each for helping to organize the proceedings, though there was considerable confusion as to how much was for expenses and how much for them to keep.

In any case, for many of the participants, the Foundation says it will pay all expenses, while for many others, it will foot all or part of their expenses after they arrive in Washington.

Among the luminaries listed on this year's "U.S. Advisory Board" are:

Morton Kaplan, University of Chicago; Seymour Kety, Harvard; Willis Lamb, University of Arizona; Harold Lasswell, The Policy Science Center, Inc.; Daniel Lerner, MIT; Frederick Seitz and Paul Weiss, Rockefeller University, and Eugene Wigner, Princeton.

Foreigners of similar rank and institutional setting are listed as members of an "International Advisory Board."

Last year's pow-wow started out with an equally elite list, but several of the expected participants resigned when it was brought to their attention that Moon and the Foundation are indistiguishable. Their explanation was that Moon linkage to the meeting had escaped their attention when they signed on. A few others simply failed to show up. The New York meeting went on as scheduled and was judged to be a scholarly success, at least by most of the participants, many of whom have become regulars and will be back for the next round.

There is apparently no disputing that Moon keeps hands off the proceedings and that the would-be unifiers of science have an opportunity to go about their business without interference from the self-styled messiah, whose command of English is so poor that his own participation is usually limited to a brief greeting.

Moon's motives for underwriting the costly annual bash—last year's bill was estimated at $400,000—clearly go beyond his obsession with "unifying" anything he can lay his hands on.

Since he is under investigation on a variety of charges, ranging from abduction to financial irregularities, it is comforting for him to get close to the prestige of the scholarly community. And so far, it has not been the least bit difficult for him to do that. All that's required is a chain reaction of scholar inviting scholar, plus assurance that he will pick up the tab.

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denied before Committees of Congress that these abuses had occurred . . . " (The GAO did voice some criticisms of NSF, but they were not as harsh as the letter suggests — SGR Vol. VI, No. 3).

"It would be most inadvisable, and in our judgment an affront to the Congress, for Dr. Stever to be appointed to another high position before this bad NSF situation has been completely investigated, and the full extent of official involvement is known. Such an appointment would bring great controversy and inevitable opposition to Dr. Stever's confirmation by the Senate."

The letter concluded with swipes at Senator Kennedy and Rep. James Symington—chairmen of subcommittees with jurisdiction over NSF—for allegedly failing "to get to the bottom of this NSF matter," plus a not very cryptic warning when viewed in the context of the President's frantic efforts to pick up convention delegates: "Your appointment of Dr. Stever as the president's science adviser will make it most difficult for Republicans to call these Democrats politically to account for their error in judgment and lack of initiatives in this most important matter."

Upon receiving word of the letter, team player Stever informed the White House that he wished the President to reconsider the offer. This was then followed by a 50-minute meeting June 22 of Stever, Vice President Rockefeller and Senators Curtis and Hanson. The meeting was held at the suggestion of Rockefeller, who has served as godfather for the new science office.

Stever emerged from the meeting saying that "everyone has a lot of thinking to do," including himself.

One account has it that Rockefeller urged the two Senators to withdraw their opposition and also urged Stever to renew his availability for the job.

Stever told SGR, "I'll think about it, but with 6 months left to go, I wonder if it's worth it." —DSG

NIH Yields Once Again To "Disease of Month Club"

An old joke has it that NIH's National Institute of General Medical Sciences fares poorly in the annual budgetary carve-up with its disease-titled sister institutes because no one ever died of general medical sciences.

With that noted, let it be recorded that what was once the National Heart Institute, and later the National Heart and Lung Institute, has just been rechristened the National Heart, Lung, and Blood Institute.

This follows a pattern, usually forced upon NIH by pressure groups that are referred to in Washington as the Disease of the Month Club.

For example, what used to be the National Institute of Arthritis and Metabolic Diseases is now known as the National Institute of Arthritis, Metabolism and Digestive Diseases.

Until 1965, NIH got along with the National Institute of Neurological Diseases and Blindness. "Blindness" then got its own institute, under the title of the National Eye Institute. The institute from which it was taken was then renamed the National Institute of Neurological Diseases and Stroke.

Last year, it was renamed the National Institute of Neurological Diseases, Communicative Disorders and Stroke.

The name changes help pacify the pressure groups and are obviously beneficial for sign painters and stationery suppliers. Whether they make any difference in expenditures and activities is a separate matter. In almost all cases, the proposal for a shift originates in Congress and is fought to the end by NIH, the Department of Health, Education, and Welfare, and the Office of Management and Budget. The three organizations are in a position to delay and skimp on new programs, and they usually do. But almost invariably, the new titles are an opening wedge and eventually they lead to new lines of activity — though slowly.

Washington, DC Area Leads Nation in Scientists, Engineers

The Washington, DC, metropolitan area, with its large concentration of federal research facilities and research-supporting agencies, leads the nation in the total number of residents who hold Ph.D.s in science or engineering — 14,072.

From the perspective of degree holders per 100,000 of population in the Census Bureau's Standard Metropolitan Statistical Areas, the leader is North Carolina's Research Triangle, with 706.4.

The following list is from a report prepared by the Research Triangle Institute on the basis of data published by the Census Bureau and the National Science Foundation.

	No. Sci/Eng Ph.D.s	(Rank)	Ph.D.s Per 100,000	(Rank)
Washington, DC-Md-Va	14,072	(1)	483.7	(3)
New York, NY-NJ	11,882	(2)	119.1	(40)
Los Angeles-Long Beach, Cal.	8,283	(3)	117.6	(42)
Boston, Mass.	7,655	(4)	264.1	(11)
Chicago, Ill.	6,939	(5)	99.4	(51)
San Francisco-Oakland, Cal.	6,330	(6)	203.6	(18)
Philadelphia, Pa-NJ	5,806	(7)	120.4	(39)
Newark, NJ	4,317	(8)	209.9	(17)
San Jose, Cal	3,247	(9)	304.9	(9)
Pittsburgh, Pa	3,139	(10)	130.3	(36)
Minneapolis-St. Paul, Minn-Wisc	3,042	(11)	154.8	(26)
Wilmington, Del-NJ-Md	2,972	(12)	595.6	(2)
Raleigh-Durham (Wake, Durham, Orange)	2,960	(13)	706.4	(1)
Houston, Tex	2,932	(14)	146.7	(30)
Denver-Boulder, Colo	2,630	(15)	212.3	(16)
Baltimore, Md	2,464	(16)	118.9	(41)
St. Louis, Mo-Ill	2,331	(17)	96.7	(53)
Rochester, NY	2,316	(18)	240.7	(13)
Detroit, Mich	2,211	(19)	49.9	(86)
Albany-Schnectady-Troy, NY	2,210	(20)	284.1	(10)
Columbus, Ohio	2,204	(21)	216.5	(15)
San Diego, Cal	2,182	(22)	157.5	(25)
Cleveland, Ohio	2,142	(23)	103.8	(49)
Dallas-Fort Worth, Tex	2,133	(24)	89.7	(58)
Seattle-Everett, Wash	2,114	(25)	148.4	(28)

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New Debate as NIH Issues Genetic Guidelines...

The National Institutes of Health last month issued its long-awaited guidelines for the regulation of new and controversial techniques for genetic engineering. But the guidelines, which took 2 years to develop, do not mean the end of serious contention over the safety of the techniques. In some respects, the debate is just beginning to flourish, particularly in the public arena.

Nevertheless, the guidelines, published along with a detailed statement and analysis by NIH Director Donald S. Fredrickson, will give the green light to some experiments. They will also have worldwide implications. Fredrickson, in short, has accepted most of the recommendations put forward last December by an NIH advisory committee (SGR Vol. V, No. 22), with a few minor modifications. Those guidelines will allow most planned experiments to go ahead under strict, but not too bothersome, safety precautions.

Discovery of the technique, in 1973, marks a fundamental turning point in biological research, and, perhaps, in the history of mankind. It may, ultimately, rank in importance with the splitting of the atom. The technique, in short, enables biologists to by-pass the normal processes of evolution by shuffling genes between different, often totally unrelated, species. Such genetic exchanges may occur naturally in a very limited manner over centuries, but biologists now have the power to create new, untested, genetic combinations virtually overnight.

So far, most genetic manipulation experiments have involved slicing genes from various organisms and splicing them into the genetic material of bacteria or viruses. The idea is that the transplanted genes will be copied each time the host reproduces, and the technique thus allows large quantities of the inserted genes to be produced for more detailed study. The chief impact of such research is likely to be in solving major genetic puzzles, but some distant commercial applications are also being discussed (see page 5).

Because the technique involves the transgression of natural genetic barriers between species, and because the transplanted genes may confer new, and unpredictable properties on their host, the technique involves some potentially grave hazards if the modified organisms were to escape from the laboratory. The safety guidelines issued last week thus seek to prevent the escape of such organisms into the environment.

They would ban the most obviously hazardous experiments, such as the insertion into bacteria of genes capable of forming botulinus toxin, and they require that other experiments use a variety of safety measures, the strictness of the measures depending on the predicted hazard of the experiment.

The guidelines offer 2 lines of defense against the escape of genetically modified microbes. First, they spell out 4 levels of physical containment, ranging from the use of normal, sterile procedures, to the use of a specially equipped laboratory modeled after a biological warfare establishment. In addition, they specify that some experiments should be performed only on microbes which have been genetically weakened so as to be virtually incapable of living outside an artificial laboratory environment.

The key part of the guidelines assigns specific containment levels to specific types of experiments. After the NIH committee proposed those guidelines in December, Fredrickson sent them to numerous scientists for review, and called a meeting of another top-level NIH advisory committee to seek public ideas on whether or not they are strict enough. From all the discussion which ensued, it is clear that there is general agreement in the scientific community that the guidelines are at least strict enough to protect public health. But there is also a small minority of scientists and a larger minority of knowledgeable public observers who believe that they are much too lax.

The dissent is likely to intensify, however, as the guidelines move from NIH into the universities where the research will actually be conducted, and it could also play an important role if the guidelines become a focus of attention on Capitol Hill. Particularly important is the fact that some of the strongest criticism has come from two eminent scientists who have no personal stake in the matter since they have no plans of their own to use the technique.

Robert Sinsheimer, chairman of the Biology Department at Caltech, wrote to Fredrickson earlier this year that "I cannot believe that under these proposed guidelines the organisms can be contained . . . the organisms will inevitably escape — and they will enter into the various ecological niches known to be inhabited by E. Coli (the human gut bacterium most commonly used in the gene transplant experiments)." He continued, "If then — as I regard as nearly inevitable — coliform (and related) organisms bearing recombinant DNA become established in various parts of our environment, what will be the consequences? I think it is highly unpredictable and likely highly dangerous."

Similarly, Erwin Chargaff, professor of biochemistry at Columbia University, told Fredrickson that "If I were asked what solution I suggest, it would be that there should be a complete stop on all forms of experimentation with artificially produced DNA

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...Cambridge Mayor Opposes New Harvard Lab

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recombinants that could in any way represent a potential danger to animal or plant life." In a letter to *Science* magazine last month, Chargaff expanded on his worries, and again urged an extended moratorium on much of the research.

Such criticisms are likely to be influential if Congress takes up the issue. Although the various NIH committees have done a diligent job in developing the guidelines, their tasks and their discussions have been centered almost solely on ways to control the research so that it can be carried out safely. They have never openly discussed the possibility of simply trying to maintain a moratorium on the field until the hazards have been defined. It could therefore be argued that Sinsheimer and Chargaff have essentially been ignored in the regulatory process, and such arguments are likely to be readily listened to on Capitol Hill.

The more critical battles over the research are, however, now likely to take place on and around the campuses hoping to use the technique. In that regard, the University of Michigan has already gone through a torturous series of debates on whether or not genetic manipulation studies should be carried out there, and it has adopted guidelines more strict than those published by NIH. (SGR Vol. VI, No. 10).

But a more interesting, and perhaps more important, dispute is brewing at Harvard University over a proposal to construct a specially designed facility in the Harvard biology labs to conduct some gene transplant experiments. Such a facility is required for many types of experiments under NIH's guidelines.

An application to build the laboratory, by converting part of the top floor of the present building, has been pending for some time, but it has encountered considerable opposition from biologists within Harvard. The dispute has now spilled over into the City of Cambridge.

Opposition came initially from biologists who do not plan to use the genetic manipulation technique. They have argued that the Harvard biology labs are overrun with cockroaches and a species of ant which has resisted many attempts at control. Thus, they argue, the labs are not suitable for housing a safety facility.

Nevertheless, preliminary approval for the safety lab was given in May by a Harvard biohazards committee. On June 4, Harvard's Committee on Research Policy also gave its approval, and on June 14, Henry Rosovsky, dean of Arts and Sciences, also backed the idea.

At that point, the Cambridge City Council stepped in. At the urging of some Harvard faculty members, Cambridge Mayor Frank Velussi has called a public meeting to discuss the matter, and he has fired off a sharply worded public statement opposing construction of the lab. The City Council apparently could block the project by refusing to issue a building permit.

The outcome of the dispute at Harvard will be closely watched in other institutions, where critics of the guidelines are seeking ways to stop the research. The problem, though, is that by stopping construction of safety laboratories, the effect might be to force experimenters to attempt to get by with less conspicuous, improvised safety systems. The scientists who want to perform the research have gone public with their concerns about safety, and have delayed their work to devise what they consider to be safe procedures. But with a lot of scientific results — and no small amount of professional glory — sitting on the horizon, many of them are impatient to get on with their work. How they will respond to public anxieties about safety is not certain.

—CN

Stanford, U. Calif. Seek Patent On Genetic Research Technique

Stanford University and the University of California may receive a healthy financial return if the genetic engineering technique is ever used commercially. And they may also have found a way to ensure that commercial application of the technique is governed by the safety guidelines issued last week by the National Institutes of Health.

The two universities have filed an application for a patent on key elements of the technique, which, if awarded in its proposed form, would seem to cover virtually any commercial use of the genetic engineering process. According to knowledgeable sources, officials from the universities are also discussing with the federal government the possibility of establishing a licensing scheme which would require users of the patent to sign an undertaking to abide by NIH's safety guidelines.

Stanford and the University of California have a stake in the technique because it was developed by groups headed by Stanley Cohen at Stanford and Herbert Boyer at the University of California, San Francisco. The 2 groups published their findings jointly in 1973 and 1974, and it was their research which essentially opened up the field which has become known as recombinant DNA research.

Their research provided the first demonstration that genes from one organism could be spliced into the genes of a different organism, in such a way that the transplanted genes are copied every time their host repro-

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OTA Council Chairman Resigns with a Blast...

The newly published annual report of the Congressional Office of Technology Assessment reveals that Caltech President Harold Brown ended his 2 years as chairman of OTA's Advisory Council with a critical letter of resignation that drew an icy reply from Rep. Olin E. Teague (D-Texas), chairman of OTA's governing board.

The exchange brings out into the open for the first time a long record of wrangling between the part-time Advisory Council and some of the members of Congress who make up OTA's 12-member Technology Assessment Board. At issue, basically, is the Council's contention that OTA has often gotten bogged down in trivial research jobs for Congressional committees, to the detriment of providing Congress with, as Brown put it, "an early warning system . . . of technological advances, including their secondary and tertiary effects, before those effects are upon us."

Brown also charged that there is poor communication between the Council and the OTA Board and staff, and raised questions about the professional quality of the full-time staff.

SGR has learned that at Teague's request, Brown softened portions of the letter that he originally submitted, but that he rejected Teague's suggestion for still further changes.

Brown's letter opens with kind words for OTA's performance of various assignments, and goes on to acknowledge that with only two years of operating experience behind it, OTA is still feeling its way.

"Yet few of us on the Council, I believe, " Brown states, "would say that we are satisfied with what has been accomplished, compared with what we hoped for and still believe possible," adding: "I have a real concern that OTA's limited resources have been less efficiently used than would ideally have been the case. I believe it would be desirable to respond negatively to more of the [Congressional] requests that are made for technology assessments. Many such requests are in fact

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duces. Though their reserach consisted of transplanting genes into bacteria, it is understood that the patent application is worded broadly enough to apply to the insertion of "foreign" genes into virtually any organism.

Though the technique is likely to have its most immediate application in research aimed at solving various genetic puzzles, there has been speculation that it may eventually lead to the construction of modified bacteria capable of performing a variety of tasks. It may be possible, for example, to construct a bacterium with a capacity to gobble up oil slicks quickly. Such potential commercial uses would be covered by the patent, if it is awarded.

Though university officials are reluctant to discuss the details of the patent application while it is still pending, they are eager to point out that, if awarded, it would not affect academic or industrial research, but would apply only to commercial uses. They are even reluctant to state when the application was filed, but since US patent laws requires that an application be filed within a year of disclosure of the information on which the patent is based, it is reasonable to assume that the application was filed within a year of the publication of Cohen's and Boyer's first paper. That was in November, 1973.

Rumors about the patent application were circulating at a symposium held at MIT last month by Miles Laboratories. Cohen, who was at the meeting, confirmed that the application had been filed, and he emphasized that neither he nor the other researchers named in the application would benefit financially if it is awarded. Stanford and the University of California usually give their scientists a share in patent proceeds, but both Cohen and Boyer say they have made personal decisions to donate their share to various causes.

Cohen's and Boyer's work was funded by NIH, but the federal government is unlikely to share in the proceeds if the patent is awarded. Stanford has a standing agreement with the Department of Health, Education, and Welfare which gives the university sole patent rights to inventions developed with HEW funds unless the project is specifically exempted from the agreement. The genetic engineering studies were not exempted, according to an HEW patent officer.

If awarded, the patent would apply only to commercial users in the United States. It is understood that Britain's National Research and Development Corporation looked into the possibility of trying to patent the technique in Britain, based on research conducted at the University of Edinburgh. British patent law, however, allows no prior disclosure of information before the patent is filed, and the idea was therefore dropped so that the technique could be put into use without delay.—CN

...But Teague Denies Central Role for Council

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for technical feasibility studies, or reviews of existing programs, or literature searches, or economic studies."

Continuing, Brown wrote: "The staff of OTA has not hitherto been uniformily of a professional background such as to allow substantial studies to be done entirely in-house. I suggest that the Board may wish to consider whether it is not desirable to increase this component of OTA's capability, and the appointment procedures necessary to produce such a result."

"The OTA's reputation outside Congress, among scientists, social scientists, technologists, industrial and business people, consumer and public advocacy groups, is mixed," Brown claimed.

Charging poor communication between the Council and the Board and staff, Brown stated, "I believe I speak for the Council in saying that we have felt the need for better communication with both of the other components than has sometimes been the case. Often, Council members have had very little time to comment on proposed assessments before TAB (Technology Advisory Board) approval."

To remedy this, Brown suggested that breakfast or luncheon meetings be held by the Council, Board, and OTA director and deputy director in conjunction with the every-other-month meetings of the Council. He also recommended that the Council chairman attend Board meetings "as an invited guest as often as possible."

Teague's response thanked Brown for his comments, stating that "With the great majority of them, I am in concurrence as, I am sure, are my colleagues on the Board." It then went on to slash away at Brown's comments.

"There *have* been problems," Teague replied. "Doubtless there are some things we would have handled differently a second time around. But the bulk of OTA's work has been welcomed by the Committees of the Congress. I do not know of a better gauge than that."

Addressing Brown's suggestion that a better qualified staff would result in less reliance on contracted studies, Teague stated, "OTA was sold to the Congress from start to finish, House and Senate, as a contract operation. It was sold on the basis of a small but highly capable in-house staff. I can say in all candor, as one who must justify OTA's budget to the Appropriations Committees each year, that OTA would be unfunded today without those assurances."

Teague conceded that "Experience now suggests the need for a somewhat larger in-house capability than the initial concept. . .It will, nonetheless, require very careful handling and should not be attempted rapidly."

And then Teague went on to instruct Brown in the jurisdiction and authority of the Advisory Council. ". . .there are some who believe the Technology Assessment Act created a Technology Assessment Board, an Advisory Council, and an OTA," Teague wrote. "Of course, it did not. Nevertheless, it seems necessary from time to time to remind a few that the Act created an Office of Technology Assessment, consisting only of the Technology Assessment Board and the Director, plus a statutory Advisory Council to assist the Board and help provide liaison with the public."

Teague added that more meetings with the Council would surely be desirable, but that Congressmen are busy and there might be scheduling problems.

Former Chairman Brown, who remains a member of the 13-member Advisory Council, was succeeded at the beginning of this year by Jerome Wiesner, president of MIT. Wiesner, who is known to share Brown's views, is a close associate of Senator Kennedy, who returns to the chairmanship of the OTA Board when the post revolves back to the Senate next January.

The report, titled *Annual Report to the Congress of the Office of Technology Assessment,* March 15, 1976, 106-page, is available for $1.55 from the US Government Printing Office, Washington, DC 20402. Order by Stock Number 052-003-00152-7.

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In Quotes: A 1974 Carter Statement on Nuclear Power

With Jimmy Carter's Presidential nomination awaiting formal endorsement from the Democratic Party Convention, his views on many key issues still remain publicly undefined. As far as nuclear power is concerned, Carter has urged strict safety standards, called for a worldwide ban on exports of uranium enrichment and plutonium reprocessing plants, and opposed California's unsuccesful anti-nuclear initiative. SGR has come across the following remarks, made by Carter in June, 1974, at the completion of Georgia's first nuclear power plant. They spell out some of Carter's own experiences with nuclear reactors, and his views about their safety:

"I became involved in the nuclear program along with those who had a vision of the utilization of atomic power not to kill, but to be used for peaceful and productive purposes . . .

"I would like to make two points . . . One concerns the safety of a plant of this sort. This is not an experiment. This is an assured, adequately researched, engineering project which has now become a commonplace source of electric power not only in our country but throughout the world. We are not endangering the lives of Georgia people.

"Years back, I operated several atomic plants. . . . .I have seen one plant that was the source of a runaway condition . . . It was in Canada, at Chalk River, and was a highly experimental heavy water reactor. The plant's design was improper, the safety mechanisms were inadequate — as I say, it was highly experimental . . . I went in several months after the problem occurred along with 22 Navy men who worked for me. We practiced to become very proficient in the disassembly of the plant. We worked strictly in isolation. Our progress was observed by remote television network . . . We went into the reactor core, as a matter of fact, with pipe wrenches and other tools, and we disassembled as much of the plant as we could in about a minute and thirty-nine seconds . . . . We received all the radiation that was permitted to us in an entire year. For a year following that, everytime one of us urinated, the urine had to be sent off to be tested to make sure we didn't get too much radioactivity, which we didn't.

"The point I'm making is that this was about twenty years ago. And this was a highly experimental mechanism, which proved not to be feasible . . . Now we have what I believe is a safe, predictable and very fruitful source of electric power . . . A great controversy is developing about the use of atomic reactors for the generation of electricity. This is a confrontation we must acknowledge and be prepared to assimilate into the scientific development of our country. We need the power . . . In the next 10 years I would estimate that the amount of electricity to be derived from nuclear power would be either 15 or 20 per cent of the nation's total electric power sources."

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